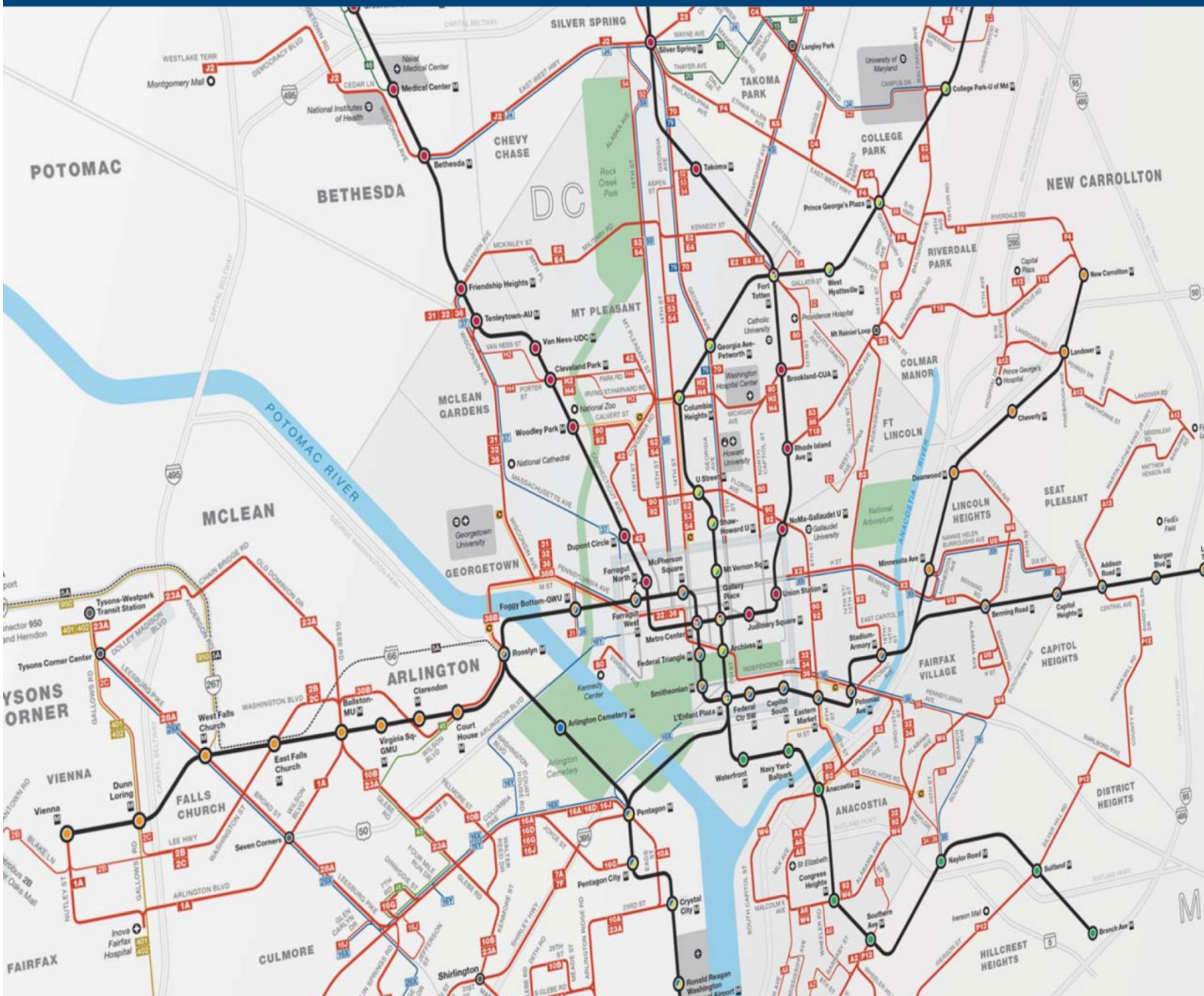


Service Operations Manager Assignments Final Report



May 2013



1. Introduction

WMATA is currently undertaking a number of initiatives to improve bus service to its passengers. One of the most important of these is the implementation of proactive headway management on its most heavily used lines through the assignment of dedicated headway managers on the line. To date WMATA has implemented this proactive dedicated line management on four lines in the system, the 70s line, the 90s line, the K Line, and the 16Y and 16F routes, and has found this proactive management very successful in improving reliability and on-time performance on these lines.

Given this success, WMATA is undertaking an effort to expand this proactive dedicated line management to other high ridership lines in the system. This document contains two sets of recommendations. The first set is strategic level recommendations related to deployment of staff to proactively manage heavy ridership lines. These strategic recommendations are outlined below in Section 2.

The second set of recommendations, outlined in Section 3 and in Appendix 1 and 2, relates to proposed locations for dedicated line managers. The analysis to complete this work was comprised of the following steps:

1. Identifying additional lines where proactive headway management should be implemented;
2. Identifying locations along the proposed lines where headway managers should be deployed;
3. Identifying the total number of headway managers required at full implementation, by location and by line.

2. Strategic Recommendations

Specific recommendations on the deployment of dedicated line managers are outlined below in Section 3. The purpose of this section is to outline overall strategic recommendations regarding a framework for how these dedicated line managers will work on a day-to-day basis. These strategic recommendations are outlined below.

- 1. Dedicated Line Manager Responsibilities** – It is strongly recommended that the dedicated line managers identified in Section 3 be focused entirely on headway management and customer support. Emergencies and other non-headway management issues would be addressed by a completely different set of managers dedicated to emergency requirements on both Metrobus and Metrorail. This group of emergency supervisors would be a wholly separate group from current rail and bus SOMS.

Conclusions based on work completed for this report indicate that headway management on heavy ridership lines is essential enough that there be a group of managers dedicated solely to headway management. It is further recommended that these dedicated managers be stationary at key points along each line (see Section 3 for more detail). At no time should these stationary line managers be pulled from the line for other assignments.

This document does not make recommendations regarding job titles for dedicated line management, but rather emphasizes the need for a group of managers focused only on headway management and customer service on heavily utilized lines (it should be noted that the dedicated supervision on the four lines with dedicated managers noted in the Introduction is provided by staff in the Headway Service Manager job title).

2. Division of Responsibilities – Bus Operations Control Center and On-time Performance Center

- The division of responsibilities between a distinct group of Service Operations Managers (SOM) responsible for responding to emergencies and other issues and dedicated line managers focused on headway management and customer service should also be carried forward to the two currently deployed operations centers. The current Bus Operations Control Center (BOCC) has a range of responsibilities, including service and headway management. The On-time Performance Center (OTPC) is more specifically focused on headway management and on-time performance. Moving forward, it is recommended that emergency response responsibilities reside with the BOCC and headway management reside solely with the OTPC. This more distinct division of responsibilities should allow for a more effective carrying out of each set of these responsibilities.

3. Division of Responsibilities at Terminals – A number of major terminals currently have SOMs assigned to them to oversee general terminal operations. The recommendations outlined in Section 3 below also propose dedicated line managers at a number of these same terminals. Where a dedicated line manager is proposed at a terminal with a currently assigned SOM, this document recommends that this SOM continue to focus on its overall terminal management responsibilities while the dedicated line manager remains focused on headway management for the lines to which he is dedicated. There should be no overlap in responsibilities in order to ensure that both sets of responsibilities are effectively addressed.

4. Technological Capabilities – Discussions with currently deployed Headway Service Managers highlight the need to equip these dedicated line managers with the most up-to-date technology, including laptop computers or electronic pads to allow for real-time tracking of buses and the most up-to-date radio communications technology. Radio technology that allows for direct communication between line managers and individual drivers will provide dedicated line managers an additional important tool to support their headway management responsibilities.

5. Shift Flexibility – Different heavy ridership lines have different peak ridership and trip times, and therefore flexibility in the times dedicated line managers are assigned to different lines is important to ensure the most effective management of the line. Providing this flexibility in assignment times would include moving away from traditional shift times as well as greater use of split shifts.

6. Evaluation of Success – Since the focus of the line managers proposed in this document is headway management and the correct separation of buses on a line, it is proposed that the

primary evaluation criteria to assess the success of these line managers be the difference between actual headway and scheduled headway separation. Metrobus now has the data from its NextBus system to calculate headway separation at different time points throughout the day. A secondary criterion would be on-time performance, though it is possible to have poor on-time performance while still having correct headway separation.

3. Location and Line Recommendations

This section outlines specific recommendations for the deployment of dedicated line managers focused on headway management and customer service. As noted above, it is proposed that each of these dedicated line managers be located at stationary points along the line and that they are not be pulled from their responsibilities to respond to emergencies or other issues. The focus of the proposed dedicated line manager assignments is on providing dedicated line management on bus lines within the Priority Corridor Network as well as a small number of other high ridership lines. The source of each recommendation is outlined in Appendix 2, which provides detailed backup on assignments by line.

Table 1 below summarizes proposed dedicated line manager assignments by location. Table 2 summarizes proposed assignments by line. This data is also summarized graphically in Figures 1, 2, and 3. Appendix 1 provides more detailed backup data for Table 1 and Appendix 1 provides detailed backup data for Table 2.

Table 1 – Proposed Dedicated Line Manager Assignments – By Location

Location	Proposed Full Time Equivalents	Lines Covered
Silver Spring (1)	1.5	Georgia Avenue/7 th Street - 70s Line 16 th Street - S Line Georgia Avenue MD – Y Line New Carrollton – Silver Spring – F4 Line Colesville Road – Columbia Pike – Z Line
Wheaton	2	Veirs Mill Road – Q Line Greenbelt – Twinbrook – C2, C4 Line Georgia Avenue – Y Line
Fort Totten (1)	0	New Hampshire Avenue – K Line North Capitol Street – 80 Line
Gallery Place	1.5	North Capitol Street – 80 Line H Street- Benning Road – X Line Georgia Avenue/7 th Street – 70s Line
McPherson Square	1.5	16 th Street – S Line 14 th Street – 50s Line Anacostia/Congress Heights – A Line (new proposed MetroExtra service)

Location	Proposed Full Time Equivalents	Lines Covered
King Street	1	Richmond Highway – REX Line Little River Turnpike – 29K, N Line
Foggy Bottom	1.5	H Street – Benning Road – X Line Wisconsin Avenue – Pennsylvania Avenue – 30s Line
Olney	.5	Georgia Avenue MD – Y Line
Glenmont	.5	Georgia Avenue MD – Y Line
New Carrollton	.5	New Carrollton – Silver Spring. Fort Totten – F4, F6 Line
Prince George's Plaza	1	New Carrollton – Silver Spring. Fort Totten – F4, F6 Line
Minnesota Avenue	2	H Street - Benning Road – X Line
McLean Gardens	.5	H Street - Benning Road – X Line
Anacostia Metro	2	Anacostia – Congress Heights – A Line Deanwood – Alabama Avenue – W4 Line
Columbia Heights	1	14 th Street – 50s Line
Friendship Heights	2	Wisconsin Avenue – Pennsylvania Avenue – 30s Line
Archives	2	Wisconsin Avenue – Pennsylvania Avenue – 30s Line
Southern Avenue – Naylor Road	1	Pennsylvania Avenue Line – 34, 39 routes
Potomac Yard	2.5	Crystal City – Potomac Yard – 9s, 9X Line
Seven Corners	1	Leesburg Pike – 28 Line
College Park Metro	1	College Park – Bethesda – J4 Line
Bethesda Metro	1	College Park – Bethesda – J4 Line
Fort Belvoir	1	Richmond Highway – REX Line
Little River Tpk/John Mar Drive	.5	Annandale – Pentagon – 29C, E, G, H, X Line
Pentagon	.5	Annandale – Pentagon – 29C, E, G, H, X Line
Greencastle P&R	.5	Colesville Road – Columbia Pike – Z Line
Burtonsville P&R	.5	Colesville Road – Columbia Pike – Z Line
Avondale (MD)	.5	Rhode Island Avenue – G8 Line
Farragut Square	.5	Rhode Island Avenue – G8 Line
Route 1 & Campus Drive (College Park)	.5	Route 1 Maryland – 80s Line
Rhode Island Ave. Metro	.5	Route 1 Maryland – 80s Line
Kennedy Center	.5	North Capitol Street – 80 Line
Union Station	1	Cardozo – U Street
Total FTE – All Locations	34	

(1) Full Time Equivalent does not reflect sharing with currently deployed dedicated line managers. See Appendix 1 for more detail

Table 2 - Proposed Dedicated Line Manager Assignments – By Line

Line	Proposed Full Time Equivalents	Line Locations Covered
Georgia Avenue MD – Y Line	1.5	Olney Glenmont Silver Spring (shared with 70s Line) Wheaton
New Carrollton – Silver Spring, Fort Totten – F4, F6 Line	2	New Carrollton Prince George’s Plaza Silver Spring (shared with Z Line)
Veirs Mill – Q Line	1	Wheaton (shared with C2, C4 Line)
16 th Street – S Line	2	McPherson Square (shared with 50s Line) Silver Spring (shared with 70s Line)
H Street – Benning Road – X Lines	4.5	Minnesota Avenue Foggy Bottom McLean Gardens Gallery Place (shared with 70s Line and 80 Line)
Anacostia/Congress Heights – A Line	1.5	Anacostia Metro (shared with W4 Line) McPherson Square (shared with S Line)
14 th Street – 50s Line	1.5	Columbia Heights McPherson Square (shared with S Line)
Wisconsin Avenue/Pennsylvania Avenue – 30s Lines	6.5	Friendship Heights Southern Avenue/Naylor Road Foggy Bottom Archives
Crystal City – Potomac Yard – 9S, 9X Line	2.5	Mid- Line – Potomac Yard Roaming along alignment
Leesburg Pike – 28 Line	1	Seven Corners
College Park – Bethesda – J4 Line	2	College Park Metro Bethesda Metro
Richmond Highway – REX Line	2	Fort Belvoir King Street Metro (shared with 29K, N Line)
Little River Turnpike – 29K, N Line	0	King Street (shared with REX)
Annandale – Pentagon – 29C, E, G, H, X	1	Little River Tpk. & John Mar Drive Pentagon
Greenbelt – Twinbrook – C2, C4 Line	.5	Wheaton (shared with Q Line)

Line	Proposed Full Time Equivalents	Line Locations Covered
Colesville Road – Columbia Pike (MD) – Z Line	1	Greencastle P&R Burtonsville P&R Silver Spring (shared with F4)
Rhode Island Avenue – G8	1	Avondale Farragut Square
Route 1 (MD) – 80s Line	1	Route 1 & Campus Drive Rhode Island Metro
North Capitol Street – 80 Line	.5	Fort Totten (shared with K Line) Gallery Place (shared with X Line, 70s Line)
Cardozo – U Street – 96-97 Line	1	Union Station
Deanwood – Alabama Avenue – W4 Line	0	Anacostia Metro (shared with A Line)
U Street Garfield – 90s Line	0 (already deployed)	8 th & H 8 th & L Duke Ellington Bridge
New Hampshire Avenue (K Line)	0 (already deployed)	Fort Totten Northwest Park
Georgia Avenue – 7 th Street – 70s Line 0	0 (already deployed)	Silver Spring Petworth Archives Gallery Place (shared with X Line, 80 Line)
Columbia Pike (VA) – 16 Line	0 (already deployed)	Columbia Pike & Walter Reed Downtown – 11 th & E and 15 th & K
Total FTE – All Lines	34	

Note: Dedicated line managers will be shared at multiple locations with other lines serving also that location. FTE requirements by line reflect these sharing arrangements. More detail is provided in Appendix 2.

Based on the total FTE of 34 line managers, the annual cost of this initiative, once fully implemented, would be \$2,720,000 in current dollars. This is based on an average cost per line manager of \$80,000, including both salary and fringe benefits. WMATA anticipates full implementation of the line manager initiative by FY 2020, meaning this cost must be reserved in the FY 2020 budget by FY 2017.

Figure 1 – Proposed Headway Manager Locations – District of Columbia

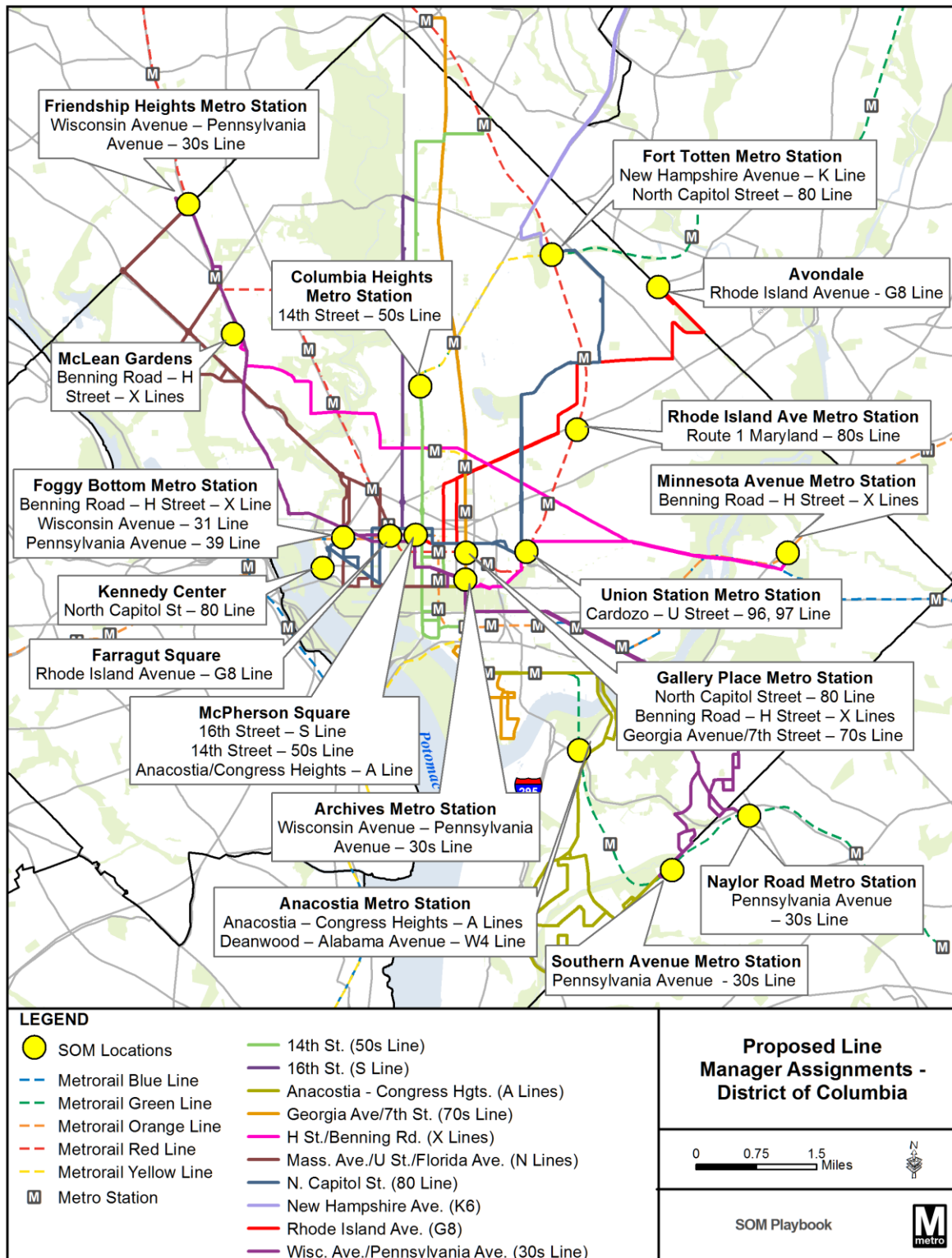


Figure 2 – Proposed Headway Manager Locations – Virginia

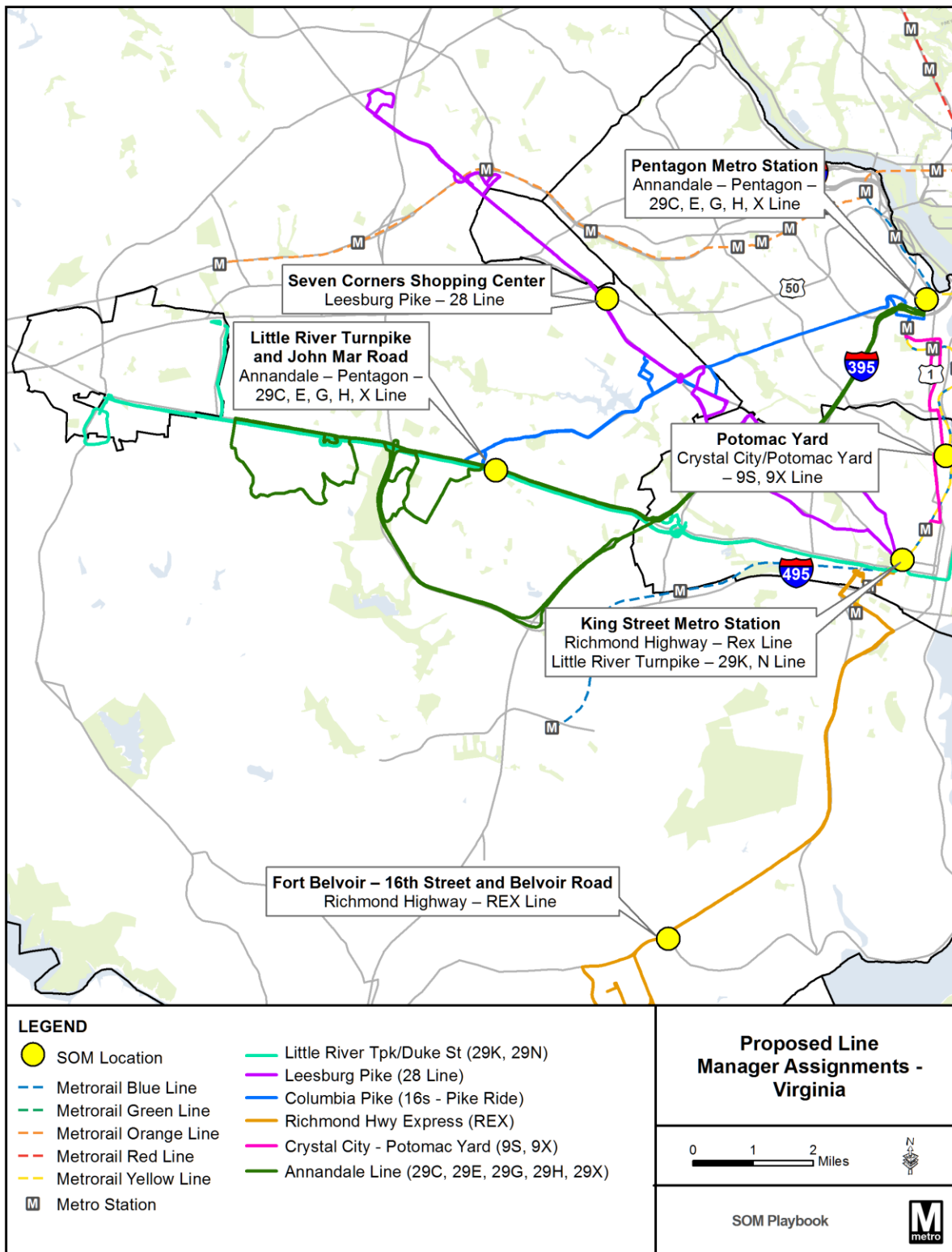
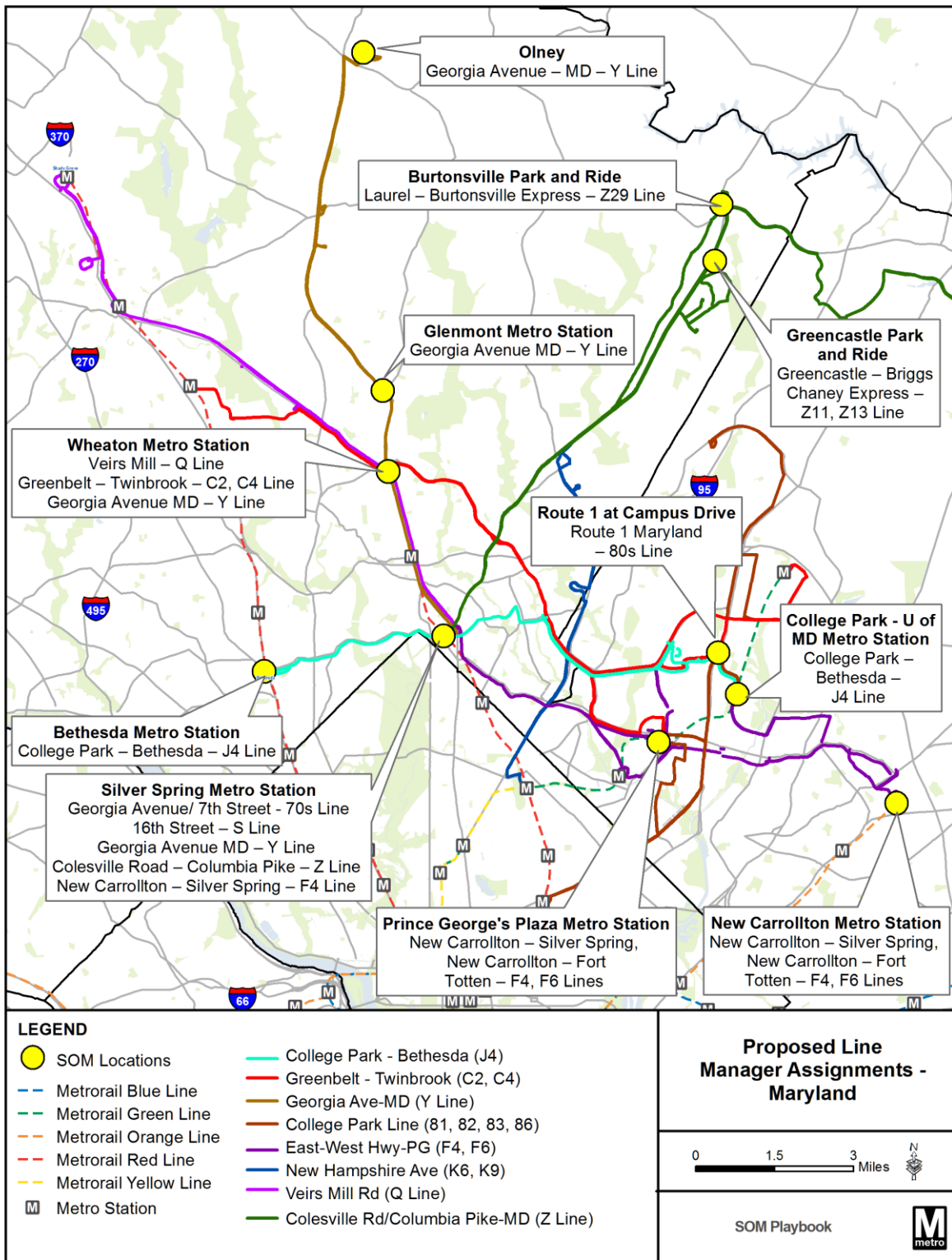


Figure 3 – Proposed Headway Manager Locations – Maryland



Appendix 1

Headway Manager Recommendations

By Location

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Silver Spring(1)	AM Peak (6:00 AM -10:00 AM)	Georgia Avenue – 7 th Street – 70s Line (2)	0	0 (2)
		16 th Street – S Line	0 (shared)	
	Mid-Day (10:00 AM – 3:00 PM)	Georgia Avenue – 7 th Street – 70s Line (2)	0	0 (2)
		16 th Street - S Line	0 (shared)	
	PM Peak (3:00 PM – 7:00 PM)	Georgia Avenue – 7 th Street – 70s Line (2)	0	1
		Georgia Avenue MD – Y Line	0 (shared)	
		New Carrollton - Silver Spring Line – F4 Line	4	
		Colesville Road – Columbia Pike – Z Line	0 (shared)	
		16 th Street – S Line	4	
	Evening (7:00 PM – 11:00 PM)	16 th Street - S Line	4	.5
Total - Silver Spring			12	1.5
Wheaton	AM Peak (6:00 AM -10:00 AM)	Veirs Mill Road – Q Line	4	.5
		Greenbelt – Twinbrook – C2, C4 Line	0 (shared)	
	Mid-Day (10:00 AM – 3:00 PM)	Greenbelt – Twinbrook – C2, C4 Line	4	.5
	PM Peak (3:00 PM – 7:00 PM)	Georgia Avenue MD – Y Line	4	1
		Veirs Mill Road – Q Line	0 (shared)	
		Greenbelt – Twinbrook – C2, C4 Line	4	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total - Wheaton			16	2

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Fort Totten (1)	AM Peak (6:00 AM -10:00 AM)	New Hampshire Avenue – K Line (3)	0	0 (3)
		North Capitol Street – 80 Line	0 (shared)	0
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	New Hampshire Avenue – K Line (3)	0	0 (3)
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total - Fort Totten			0	0
Gallery Place (4)	AM Peak (6:00 AM -10:00 AM)	North Capitol Street – 80 Line, H Street – X Line, Georgia Avenue/7 th Street – 70s Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	North Capitol Street – 80 Line, H Street – X Line, Georgia Avenue/7 th Street – 70s Line	4	.5
	PM Peak (3:00 PM – 7:00 PM)	North Capitol Street – 80 Line, H Street – X Line, Georgia Avenue/7 th Street – 70s Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total - Gallery Place			12	1.5
McPherson Square (1)	AM Peak (6:00 AM -10:00 AM)	16 th Street – S Line	4	.5
		14 th Street – 50s Line		
	Mid-Day (10:00 AM – 3:00 PM)	n/a		0
	PM Peak (3:00 PM – 7:00 PM)	16 th Street – S Line	4	.5
		Anacostia/Congress Heights – A Line (new proposed MetroExtra Service)		
		14 th Street – 50s Line		
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – McPherson Square			12	1.5

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
King Street (1)	AM Peak (6:00 AM -10:00 AM)	Richmond Highway – REX Line	4	.5
		Little River Turnpike – 29 K, N Line		
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	Richmond Highway – REX Line	4	.5
		Little River Turnpike – 29 K, N Line		
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – King Street			8	1
Foggy Bottom (1)	AM Peak (6:00 AM -10:00 AM)	H Street – X Line	4	.5
		Wisconsin Avenue/Pennsylvania Avenue – 30s Line	0 (shared)	
	Mid-Day (10:00 AM – 3:00 PM)	Wisconsin Avenue/Pennsylvania Avenue – 30s Line	4	.5
	PM Peak (3:00 PM – 7:00 PM)	Wisconsin Avenue/Pennsylvania Avenue – 30s Line	4	.5
	Evening (7:00 PM – 11:00 PM)	Wisconsin Avenue/Pennsylvania Avenue – 30s Line	0	0
Total – Foggy Bottom			12	1.5
Olney	AM Peak (6:00 AM -10:00 AM)	Georgia Avenue MD – Y Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Olney			4	.5

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Glenmont	AM Peak (6:00 AM -10:00 AM)	Georgia Avenue MD – Y Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Glenmont			4	.5
New Carrollton	AM Peak (6:00 AM -10:00 AM)	New Carrollton – Silver Spring – F4, F6 Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – New Carrollton			4	.5
Prince George's Plaza	AM Peak (6:00 AM -10:00 AM)	New Carrollton – Silver Spring – F4, F6 Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	New Carrollton – Silver Spring – F4, F6 Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Prince George's Plaza			8	1

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Minnesota Avenue	AM Peak (6:00 AM -10:00 AM)	H Street – X Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	H Street – X Line	4	.5
	PM Peak (3:00 PM – 7:00 PM)	H Street – X Line	4	.5
	Evening (7:00 PM – 11:00 PM)	H Street – X Line	4	.5
Total – Minnesota Avenue			16	2
McLean Gardens	AM Peak (6:00 AM -10:00 AM)	H Street – X Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – McLean Gardens			4	.5
Anacostia Metro	AM Peak (6:00 AM -10:00 AM)	Anacostia Congress Heights – A Line	4	.5
		Deanwood – Alabama – W4 Line	0 (shared)	
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	Anacostia Congress Heights – A Line	4	.5
		Deanwood – Alabama – W4 Line	0 (shared)	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
	Weekend (all day)	Anacostia Congress Heights – A Line	8	1
Total – Anacostia Metro			16	2

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Columbia Heights	AM Peak (6:00 AM -10:00 AM)	14 th Street – 50s Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	14 th Street – 50s Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Columbia Heights			8	1
Friendship Heights	AM Peak (6:00 AM -10:00 AM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
	PM Peak (3:00 PM – 7:00 PM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
	Evening (7:00 PM – 11:00 PM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
Total – Friendship Heights			16	2
Archives	AM Peak (6:00 AM -10:00 AM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
	PM Peak (3:00 PM – 7:00 PM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
	Evening (7:00 PM – 11:00 PM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
Total – Archives			16	2

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Southern Avenue – Naylor Road	AM Peak (6:00 AM -10:00 AM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	Wisconsin Avenue – Pennsylvania Avenue 30s Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Southern Avenue/Naylor Road			8	1
Potomac Yard	AM Peak (6:00 AM -10:00 AM)	Crystal City – Potomac Yard – 9S, 9X – Stationary	4	1
		Crystal City – Potomac Yard – 9S, 9X – Roaming	4	
	Mid-Day (10:00 AM – 3:00 PM)	Crystal City – Potomac Yard – 9S, 9X – Stationary	4	.5
	PM Peak (3:00 PM – 7:00 PM)	Crystal City – Potomac Yard – 9S, 9X – Stationary	4	.5
		Crystal City – Potomac Yard – 9S, 9X – Roaming	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Potomac Yard			20	2.5

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Seven Corners	AM Peak (6:00 AM -10:00 AM)	Leesburg Pike – 28 Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	Leesburg Pike – 28 Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Seven Corners			8	1
College Park Metro	AM Peak (6:00 AM -10:00 AM)	College Park – Bethesda – J4 Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	College Park – Bethesda – J4 Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – College Park Metro			8	1
Bethesda Metro	AM Peak (6:00 AM -10:00 AM)	College Park – Bethesda – J4 Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	College Park – Bethesda – J4 Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Bethesda Metro			8	1

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Fort Belvoir	AM Peak (6:00 AM -10:00 AM)	Richmond Highway – REX Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	Richmond Highway – REX Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Fort Belvoir			8	1
Little River Turnpike and John Mar Drive	AM Peak (6:00 AM -10:00 AM)	Annandale – Pentagon – 29C, E, G, H,X Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Little River Turnpike – John Mar Drive			4	.5
Pentagon	AM Peak (6:00 AM -10:00 AM)	n/a	0	0
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	Annandale – Pentagon – 29C, E, G, H,X Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Pentagon			4	.5

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Greencastle P&R	AM Peak (6:00 AM -10:00 AM)	Colesville Road – Columbia Pike – Z Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Greencastle P&R			4	.5
Burtonsville P&R	AM Peak (6:00 AM -10:00 AM)	Colesville Road – Columbia Pike – Z Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total - Burtonsville P&R			4	.5
Avondale (MD)	AM Peak (6:00 AM -10:00 AM)	Rhode Island Avenue – G8	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Avondale			4	.5

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Farragut Square	AM Peak (6:00 AM -10:00 AM)	n/a	0	0
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	Rhode Island Avenue – G8	4	.5
Total – Farragut Square			4	.5
Route 1 & Campus Drive (College Park)	AM Peak (6:00 AM -10:00 AM)	Route 1 Maryland – 80s Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Route 1 and Campus Drive			4	.5
Rhode Island Avenue Metro	AM Peak (6:00 AM -10:00 AM)	n/a	0	0
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	Route 1 Maryland – 80s Line	4	.5
Total - Rhode Island Avenue Metro			4	.5

Location	Time of Day	Lines Served	Hours Per Time Period	Location Full Time Equivalent
Kennedy Center	AM Peak (6:00 AM -10:00 AM)	n/a	0	0
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	n/a	0	0
	Evening (7:00 PM – 11:00 PM)	North Capitol Street – 80 Line	4	.5
Total – Kennedy Center			4	.5
Union Station	AM Peak (6:00 AM -10:00 AM)	Cardozo – U Street – 96-97 Line	4	.5
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0
	PM Peak (3:00 PM – 7:00 PM)	Cardozo – U Street – 96-97 Line	4	.5
	Evening (7:00 PM – 11:00 PM)	n/a	0	0
Total – Union Station			8	1
TOTAL – ALL LOCATIONS				34

- (1) This terminal is served by multiple lines for which recommendations have been made – for the purpose of calculating required Full Time Equivalents, it is assumed each dedicated headway manager will be responsible for two lines. At Silver Spring, actual responsibilities for line sharing will be identified once bay assignments at the new Silver Spring Transit Center are finalized.
- (2) Dedicated headway managers at Silver Spring for the Georgia Avenue – 7th Street Line are already deployed – current managers are not counted toward future requirements - currently deployed managers will be shared with one other line at Silver Spring
- (3) Dedicated headway managers at Fort Totten for the New Hampshire Avenue Line are already deployed – not counted toward future requirements – currently deployed managers will be shared with the North Capitol Street Line in the AM Peak
- (4) Proposed location at Gallery Place based on this location as a crossroads for three busy lines, the H Street Line, the North Capitol Street Line, and the Georgia Avenue, 7th Street Line – It is proposed that the Headway Manager at this location handle all three lines.

Appendix 2

Headway Manager Recommendations

By Line

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Georgia Avenue MD – Y Line	AM Peak (6:00 AM -10:00 AM)	Olney	4	.5	For calculation of FTE requirements, the analysis assumes the Y Line manager at Silver Spring in the PM Peak will be shared with the 70s Line Manager, who is already deployed. Recommendation is from PCN Study completed for the Line
		Glenmont	4	.5	
	Mid-Day (10:00 AM – 3:00 PM)	n/a			
	PM Peak (3:00 PM – 7:00 PM)	Silver Spring	0	0	
		Wheaton	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a			
Total – Georgia Avenue MD - - Y Line			12	1.5	
New Carrollton Silver Spring - F4, F6 Line	AM Peak (6:00 AM -10:00 AM)	New Carrollton	4	.5	For calculation of FTE requirements, the analysis assumes manager at Silver Spring will be shared with Z Line manager. The FTE is assigned to this line for calculation purposes. Recommendation is from PCN Study completed for the Line
		PG Plaza	4	.5	
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	PG Plaza	4	.5	
		Silver Spring	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a			
Total – New Carrollton – Silver Spring – F4, F6 Line			16	2	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Veirs Mill Road – Q Line	AM Peak (6:00 AM -10:00 AM)	Wheaton	4	.5	Original PCN Study recommendation was for a dedicated roving supervisor.
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Wheaton	4	.5	Recommendation in this study is for this roving supervisor to become a stationary supervisor at Wheaton.
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Veirs Mill Road – Q Line			8	1	<p>This manager would be shared with the C2, C4 Line in the AM and PM Peaks. FTE requirements for the shared manager are accounted for here.</p> <p>Recommendation is from PCN Study completed for the Line</p>

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
16 th Street – S Line	AM Peak (6:00 AM -10:00 AM)	McPherson Square	4	.5	For calculation of FTE requirements, the analysis assumes the S Line manager at Silver Spring will be shared with the 70s Line Manager in the AM Peak and the Mid-Day. This manager is already deployed. For FTE calculations, it is also assumed that the Line Manager at McPherson Square will be shared with the 50s Line in the AM Peak and the A Line in the PM peak. FTE requirements for these shared positions are shown here for the 16 th Street Line. Recommendation is from PCN Study completed for the Line
		Silver Spring	0	0	
	Mid-Day (10:00 AM – 3:00 PM)	Silver Spring	0	0	
	PM Peak (3:00 PM – 7:00 PM)	McPherson Square	4	.5	
		Silver Spring	4	.5	
	Evening (7:00 PM – 11:00 PM)	Silver Spring	4	.5	
Total – 16th Street – S Line			16	2	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
H Street – Benning Road – X Lines	AM Peak (6:00 AM -10:00 AM)	Minnesota Avenue	4	.5	Recommendation is from PCN Study completed for the Line.
		Foggy Bottom	4	.5	
		McLean Gardens	4	.5	
		Gallery Place	4	.5	
	Mid-Day (10:00 AM – 3:00 PM)	Minnesota Avenue	4	.5	Gallery Place manager identified as part of process for this study. Manager will handle mid-line corrections for the 70s, X Lines, and the 80s Line. Manager at Gallery Place would handle all three lines. FTE for shared manager accounted for here.
		Gallery Place	4	.5	
	PM Peak (3:00 PM – 7:00 PM)	Minnesota Avenue	4	.5	
		Gallery Place	4	.5	
	Evening (7:00 PM – 11:00 PM)	Minnesota Avenue	4	.5	
	Total – H Street – Benning Road – X Lines			36	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Anacostia/Congress Heights – A Line	AM Peak (6:00 AM -10:00 AM)	Anacostia Metro	4	.5	For calculation of FTE requirements, the analysis assumes the A Line manager at McPherson Square in the PM Peak will be shared with the 16 th Street Line. This FTE requirement is included under the 16 th Street Line section. Anacostia Metro manager in AM and PM peak will be shared with W4 Line. FTE for shared line accounted for here. Recommendation is from PCN Study completed for the Line
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Anacostia Metro	4	.5	
		McPherson Square	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
	Weekend	Anacostia Metro	4	.5	
Total – Anacostia/Congress Heights – A Line			12	1.5	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
14 th Street – 50s Line	AM Peak (6:00 AM -10:00 AM)	Columbia Heights	4	.5	For calculation of FTE requirements, the analysis assumes the 14 th Street Line manager at McPherson Square in the AM Peak will be shared with the 16 th Street Line. This FTE requirement is included under the 16 th Street Line section. Recommendation is from PCN Study completed for Line
		McPherson Square	0	0	
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Columbia Heights	4	.5	
		McPherson Square	0	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total 14th Street – 50s Line			8	1.5	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Wisconsin Avenue/Pennsylvania Avenue – 30s Lines	AM Peak (6:00 AM -10:00 AM)	Friendship Heights	4	.5	Recommendation is from PCN Study completed for Line.
		Southern Avenue/Naylor Road	4	.5	
		Foggy Bottom	4	.5	
		Archives	4	.5	
	Mid-Day (10:00 AM – 3:00 PM)	Friendship Heights	4	.5	PCN Study originally proposed dedicated roving supervisors in Southeast, Downtown, and Northwest. The new proposal is for stationary managers at terminal points, focused on headway management and customer service.
		Foggy Bottom	4	.5	
		Archives	4	.5	
	PM Peak (3:00 PM – 7:00 PM)	Friendship Heights	4	.5	
		Southern Avenue/Naylor Road	4	.5	
		Archives	4	.5	
		Foggy Bottom	4	.5	
	Evening (7:00 PM – 11:00 PM)	Friendship Heights	4	.5	
		Archives	4	.5	
Total – Wisconsin Avenue – Pennsylvania Avenue – 30s Line			52	6.5	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Crystal City – Potomac Yard – 9S, 9X Line	AM Peak (6:00 AM -10:00 AM)	Mid-Line – Potomac Yard	4	.5	Recommendation is that the focus of the roaming manager be on headway separation at terminals but having the flexibility to roam if necessary. Recommendation is from Crystal City-Potomac Yard Implementation Study
		Roaming – Predominantly at Terminals	4	.5	
	Mid-Day (10:00 AM – 3:00 PM)	Mid-Line – Potomac Yard	4	.5	
	PM Peak (3:00 PM – 7:00 PM)	Mid-Line – Potomac Yard	4	.5	
		Roaming – Predominantly at Terminals	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Crystal City – Potomac Yard – 9S, 9X			20	2.5	
Leesburg Pike – 28 Line	AM Peak (6:00 AM -10:00 AM)	Seven Corners	4	.5	Recommendation is from PCN Study completed for Line
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Seven Corners	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Leesburg Pike – 28 Line			8	1	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
College Park – Bethesda – J4 Line	AM Peak (6:00 AM -10:00 AM)	College Park Metro	4	.5	This is a PCN Corridor. Recommendation based on maintaining headway separation at terminals. Mid-Line corrections can be handled by general supervisor assigned to Langley Park.
		Bethesda Metro	4	.5	
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	College Park Metro	4	.5	
		Bethesda Metro	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – College Park – Bethesda – J4 Line			16	2	
Richmond Highway – REX Line	AM Peak (6:00 AM -10:00 AM)	Fort Belvoir	4	.5	This is a PCN Corridor. Recommendation is based on maintaining headway separation at Terminals. King Street location will be shared with Little River Turnpike-Duke Street Line. FTE for shared managers is accounted for here.
		King Street Metro	4	.5	
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Fort Belvoir	4	.5	
		King Street Metro	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Richmond Highway – REX Line			16	2	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Little River Turnpike – 29K, N Line	AM Peak (6:00 AM -10:00 AM)	King Street	0	0	This is a PCN corridor. Recommendation focus is on maintaining headways at shared terminal. This manager will be shared with REX Line manager at King Street. FTE requirements accounted for in the REX Line section of table
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	King Street	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Little River Turnpike – 29K, N Line			0	0	
Annandale – Pentagon Line – 29C, E, G, H, X	AM Peak (6:00 AM -10:00 AM)	Little River Turnpike & John Mar Drive	4	.5	This is a PCN corridor. Little River Turnpike & John Mar is first common point where branches meet - focus would be on correct headway separation on trunk.
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Pentagon	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Annandale – Pentagon – 29C, E, G, H, X Line			8	1	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Greenbelt – Twinbrook – C2, C4 Line	AM Peak (6:00 AM -10:00 AM)	Wheaton	0	0	This is a PCN Corridor. Recommendation focus is on mid-line correction for the C4 Line and terminal correction for the C2 Line. This manager would be shared with the Q Line during the AM and PM peak. The required FTE is accounted for in the Q Line section of this table.
	Mid-Day (10:00 AM – 3:00 PM)	Wheaton	4	.5	
	PM Peak (3:00 PM – 7:00 PM)	Wheaton	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Greenbelt – Twinbrook – C2, C4 Line			4	.5	
Colesville Road – Columbia Pike (MD) – Z Lines	AM Peak (6:00 AM -10:00 AM)	Greencastle P&R	4	.5	This is a PCN Corridor. Proposed assignments are based on correct inbound headway separation in the AM peak and outbound separation in the PM peak. For FTE calculation purposes, it is assumed this line will share manager with the F4 at Silver Spring in the PM peak. FTE is accounted for in the F4 section of this table.
		Burtonsville P&R	4	.5	
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Silver Spring	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Colesville Road – Columbia Pike – Z Lines			8	1	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Rhode Island Avenue – G8 Line	AM Peak (6:00 AM -10:00 AM)	Avondale	4	.5	This is a PCN corridor. Proposed assignment based on providing correct inbound headway separation in the AM peak and correct outbound headway separation in the PM peak
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Farragut Square	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Rhode Island Avenue - G8 Line			8	1	
Route 1 MD – 80s Line	AM Peak (6:00 AM -10:00 AM)	Route 1 & Campus Drive – College Park	4	.5	This is a PCN corridor. Proposed assignment based on providing correct inbound headway separation in the AM peak and correct outbound headway separation in the PM peak.
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Rhode Island Avenue Metro	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Route 1 MD – 80s Line			8	1	Route 1 and Campus Drive is the starting point of the common trunk for the 83 and 86 routes. This location will ensure correct headway separation at the beginning of the trunk.

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
North Capitol Street – 80 Line	AM Peak (6:00 AM -10:00 AM)	Fort Totten	0	0	This is a PCN corridor. Proposed assignment based on correct inbound headway separation in the AM peak and correct outbound headway separation in the PM Peak.
		Gallery Place	0	0	
	Mid-Day (10:00 AM – 3:00 PM)	Gallery Place	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Kennedy Center	4	.5	
		Gallery Place	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – North Capitol Street – 80s Line			4	.5	<p>AM peak assignment will be shared with the K Line manager at Fort Totten. This manager is already deployed.</p> <p>Gallery Place assignment will be shared with X Line and 70s Line – focus is on mid-line corrections on all three lines. FTE for Gallery Place accounted for under X Line section of this table.</p>

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Cardozo – U Street – 96 - 97 Line	AM Peak (6:00 AM -10:00 AM)	Union Station	4	.5	Recommendation made as part of a Service Evaluation Study of the Line. Recommendation focuses on mid-line headway correction for both routes
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Union Station	4	.5	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Cardozo – 96 – 97 Line			8	1	
Deanwood – Alabama – W4 Line	AM Peak (6:00 AM -10:00 AM)	Anacostia Metro	0	0	Recommendation made as result of a Service Evaluation Study of the Line. Recommendation focuses on terminal location for the Line. Manager for this line will be shared with A Line manager. FTE requirement for shared manager accounted for under the A Line section of this Table.
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Anacostia Metro	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
Total – Deanwood – Alabama Avenue – W4 Line					

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
U Street – Garfield – 90s Lines	AM Peak (6:00 AM -10:00 AM)	8 th & H	0	0	Headway Service Managers, focused on correct headway separation and customer service, are already deployed on the U Street – Garfield Line. No additional FTEs are required.
		8 th & L	0	0	
		Duke Ellington Bridge	0	0	
	Mid-Day (10:00 AM – 3:00 PM)	8 th & H	0	0	
		8 th & L	0	0	
		Duke Ellington Bridge	0	0	
	PM Peak (3:00 PM – 7:00 PM)	8 th & H	0	0	
		8 th & L	0	0	
		Duke Ellington Bridge	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
New Hampshire Avenue – K Line	AM Peak (6:00 AM -10:00 AM)	Fort Totten	0	0	Headway Service Managers, focused on correct headway separation and customer service, are already deployed on the New Hampshire Avenue Corridor No additional FTEs are required.
		Northwest Park	0	0	
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Fort Totten	0	0	
		Northwest Park	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	

Line	Time of Day	Assignment Location	Hours per Period	Line FTE	Notes
Georgia Avenue – 7 th Street – 70s Line	AM Peak (6:00 AM -10:00 AM)	Silver Spring	0	0	Headway Service Managers, focused on correct headway separation and customer service, are already deployed on the Georgia Avenue/7 th Street Line at Silver Spring, Petworth, and Archive. No additional FTEs are required at these locations.
		Petworth	0	0	
		Archives	0	0	
		Gallery Place	0	0	
	Mid-Day (10:00 AM – 3:00 PM)	Silver Spring	0	0	
		Petworth	0	0	
		Archives	0	0	
		Gallery Place	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Silver Spring	0	0	Headway Service Managers, focused on correct headway separation and customer service, are already deployed on the Columbia Pike Line. No additional FTEs are required at these locations
		Petworth	0	0	
		Archives	0	0	
		Gallery Place	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	
					Gallery Place manager will be shared with x Line and 80 Line. FTE for this location accounted for in X Line section of this table
Columbia Pike (VA) – 16 Line	AM Peak (6:00 AM -10:00 AM)	Columbia Pike & Walter Reed	0	0	Headway Service Managers, focused on correct headway separation and customer service, are already deployed on the Columbia Pike Line. No additional FTEs are required at these locations
	Mid-Day (10:00 AM – 3:00 PM)	n/a	0	0	
	PM Peak (3:00 PM – 7:00 PM)	Downtown – 11 th & E and 15 th & K	0	0	
	Evening (7:00 PM – 11:00 PM)	n/a	0	0	